REMARKS

Applicant thanks the Examiner for the thorough consideration given the present application. Claims 1-20 are pending, of which claims 1, 6, 8, and 10 are independent.

The rejection of claims 1, 2, and 6-12 under 35 U.S.C. §102(b) as being anticipated by Davis et al. (U.S. 4,799,687) is obviated by the amendments to independent claims 1, 6, 8, and 10. Claims 1, 6, and 8 are amended to recite a colour sensor having a combination of features, including a plurality of LEDs arranged to function as photosensitive devices having differing and adjacent overlapping spectral responses, characteristics, light emissions, and bands, respectively. Independent claim 10 now recites a method of sensing colour having a combination of steps, including illuminating a sample to be sensed and causing a plurality of LEDs to separately and respectively receive and respond to reflected light in different and adjacent overlapping spectral bands resulting from the sample being illuminated during the illuminating step.

Davis does not disclose a sensor having a plurality of LEDs arranged to function as photosensitive devices having differing and adjacent overlapping spectral responses, characteristics, light emissions, or bands or a color-sensing method having a combination of steps, including illuminating a sample to be sensed and causing a plurality of LEDs to separately and respectively receive reflected light in different and adjacent overlapping spectral bands.

The Office Action relies on FIGS. 9A and 9B of Davis and their associated description as disclosing an arrangement wherein colors in spatially overlapping fields of view 150 and 160 are detected by transceivers A and B. Each transceiver includes an infrared LED that is sequentially activated into emitting and detecting states. While in the emitting state, energy emitted by the LED is amplitude modulated at a particular frequency, indicated for transceivers A and B by spacings T2 and T4 in FIG. 9B. In the emitting mode, switches 155 and 156 of transceiver A are activated so that amplitude modulated power from source 157 is applied to LED 152 of transceiver A.

While the LED of transceiver A is in the emitting mode, the LED of transceiver B is in the receive mode, so that the output of the LED of transceiver B is coupled to the amplifier of transceiver B. Transceiver B supplies a signal to tone decoder 166 that detects the frequency of oscillator 2, to supply a signal to the scoring device of transceiver B. While the LED of transceiver B is emitting, the opposite sequence of events occurs, such that tone decoder 159 of transceiver A responds to the frequency of oscillator 164 of transceiver B.

Thus, contrary to Applicant's amended independent claims 1, 6, 8, and 10, the LEDs of Davis' transceivers A and B do not have differing, overlapping spectral properties. While the disclosure at column 3, lines 61-63, indicates the light emitted from different sources can have different colors, there is no indication that the colors have

overlapping spectral properties. It appears that the device of FIG. 9 would be inoperative if transceivers A and B have LEDs with different spectral properties. In order for the LED of transceiver B to be responsive to the energy of the LED of transceiver A, the LEDs of both transceivers must have the same spectral properties. Yet there is no basis for concluding that the structure shown in FIG. 9A of Davis would have LEDs with differing and adjacent overlapping spectral characteristics as required by Applicants amended independent claims. Accordingly, claims 1, 2, and 6-12 are not anticipated by Davis, and withdrawal of the rejection is in order.

Applicant traverses the rejection of claims 3-5 under 35 U.S.C. §103(a) as being unpatentable over Davis. Claims 3-5 depend on and are allowable with independent claim 1 for at least the same reasons as discussed above. As acknowledged in the Office Action, Davis does not disclose using one LED subset to illuminate a sample and another LED subset to detect light reflected from the sample, and Applicant cannot agree that it would have been obvious to do so to allow one LED to detect the light signal emitted from the other LED. It would not have been obvious to one skilled in the art to have modified Davis to include the limitations of claims 3-5. Withdrawal of the rejection is in order.

Claims 13-20 are added to provide Applicant with the protection to which he is deemed entitled. Claims 13-20 depend on and are allowable with independent claims 1, 6, 8, and 10. Support for added

claims 13-20 can be found in the application as filed. For example, similar to claim 1, claim 13 requires LEDS having differing and adjacent overlapping spectral light detection characteristics. The features of claims 14-16 are evident from the circuit diagrams; the features of claim 17 are discussed on page 5, line 17, through page 6, line 15, of the specification; and the features of claims 18-20 are described on page 5, line 17, through page 6, line 22.

In view of the foregoing amendments and remarks, favorable reconsideration and allowance are respectfully requested and deemed in order.

To the extent necessary during prosecution, Applicants hereby request any required extension of time not otherwise requested and hereby authorize the Commissioner to credit any overpayment or to charge any required fees not otherwise paid, including application processing, extension, and extra claims fees, to Deposit Account No. 08-2025.

Respectfully submitted,
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